

Authorities and Planning for Beneficial Use of Dredged Material



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Outline

- A bit about Beneficial Use of Dredged Material
- Corps Authorities and Policy
- A Few Observations

What is “Beneficial Use” of Dredged Material?

- ***Utilizing dredged sediments as resource materials in productive ways***
- Lots of opportunity:
 - U.S. Commission on Ocean Policy. Page 142: "Of the 300 million cubic yards of sediment the USACE dredges annually to facilitate navigation, an estimated 5 to 10 percent is contaminated." NRC, Committee on Contaminated Marine Sediments, National Academy Press. 1997.
 - Implying that there is *a lot* of clean material available
 - But even contaminated material may be used beneficially depending upon the application and circumstances
 - Others dredge sediment too

Categories of Beneficial Uses

1. Engineering

- **Land Creation**
- **Land Reclamation, Improvement**
 - **Minelands, brownfields**
- **Beaches**
- **Offshore Berms**
- **Capping**
- **Shore Protection**
- **Replacement Fill**

2. Agricultural and Product

- **Topsoil improvements**
- **Aquaculture**
- **Construction Material**
 - **Aggregate for concrete**

3. Environmental Enhancement

- **Aquatic Habitat restoration**
-Wetland restoration and Establishment, other
- **Upland Habitat restoration, Nesting Island**
- **Fisheries Improvement and Offshore Berms**



	Dredged Material Sediment Type				
Beneficial Use Options	Rock	Gravel & Sand	Consolidated Clay	Silt/Soft Clay	Mixture
Engineered Uses					
Land creation	X	X	X	X	X
Land improvement	X	X	X	X	X
Berm creation	X	X	X		X
Shore protection	X	X	X		
Replacement fill	X	X			X
Beach nourishment		X			
Capping		X	X		X
Agricultural/Product Uses					
Construction materials	X	X	X	X	X
Aquaculture			X	X	X
Topsoil				X	X
Environmental Enhancements					
Wildlife habitats	X	X	X	X	X
Fisheries improvement	X	X	X	X	X
Wetland restoration			X	X	X

AUTHORITIES

- Base Plan or Federal Standard – cost effective, consistent with economic, engineering and environmental criteria
- Specifically Authorized Projects
 - Sec 204 of WRDA 92, as amended
 - Sec 207 of WRDA 96, as amended
 - Sec 145 of WRDA 76, as amended
- Contributed funds

**WRDA 2007,
Sec 2037
amends
these**

Base Plan or Federal Standard

- **BU as part of O&M costs within the “base plan”.**
 - (costs e.g. dredging, transport, placement, environ. compliance)
- **One of the most common ways BU is accomplished**
 - Policy supports BU in all circumstances where it's practicable, cost-effective, and it can be accomplished in compliance w/requirements of Federal law.
 - HQ endorses flexibility in applying the base plan concept, particularly for disposal options compatible with coastal processes and movement of sediment.
- **However, not realistic to expect extremely tight CW O&M budget to fund significant increases in BU at 100% Federal costs**
 - Constrained funding requires that O&M budget priority be the maintenance of commercial navigation channels to achieve national benefits.
- **WRDA continues endorsement of cost sharing added increment**
- **Creative Federal, state and private partnerships are the key**

SPECIFICALLY AUTHORIZED PROJECTS

- **Dual-purpose navigation and ecosystem restoration**
 - Houston/Galveston Channel Deepening, Oakland Channel Deepening
- **Coastal Restoration or Beach Nourishment Project using dredged material**
 - Louisiana Coastal Area – Title VII-WRDA 07 – Authorizes \$100M for BU of dredged material
- **BU to accomplish authorized mitigation**
 - Island restoration in Jamaica Bay for NY/NJ Harbor deepening

SECTION 204 OF WRDA

92**

- Dredged material for protection, restoration, and creation of aquatic and ecologically related habitats*
- Cost sharing of incremental cost at 75 % Fed & 25% non-Fed; non-Fed O&M **
- \$15M annual appropriations limit; up to \$5M/project**

**WRDA 07, Sec 2037:

- Broaden include flood control/flood damage reduction;
- 65% Fed/35% non-Fed;
- \$30M annual appropriation limit

SECTION 207 OF WRDA

96 **

- May select disposal that is not the least costs if incremental costs are reasonable in relation to the *environmental benefits*.
 - Reasonable: <25%, or \$300,000
- Increment cost shared 75 % Federal & 25 % non-Federal; non-Federal O&M **
- No annual appropriations limit
- No programmatic funding
- Most applicable for:
 - Environmental BU added to “new projects”, post authorization, but before construction completion, or
 - “Large beneficial use” at existing maintenance project (e.g. >\$5M)

**WRDA 07, Sec 2037: 65% Fed/35% non-Fed

SECTION 145 OF WRDA

76**

- Authority to place suitable dredged material on beaches, as part of construction, operation or maintenance of authorized navigation projects
- Increment economically *justified based on shore protection benefits*
- Cost sharing 65% Federal, 35% non-Federal
- Beach open for public use
- Limited use - lack of cost sharing partners.

WRDA 07, Sec 2037 consolidates w/Sec 204 and repeals Sec 145

- *except for completion of projects being carried out on the day before the enactment of WRDA 07*

“CONTRIBUTED FUNDS”

- 33 U.S.C. 560 & 701h
 - Allows contributed funds for navigation, flood damage reduction, or ecosystem restoration.
- Up to \$2M for BU may be approved by District Commander.
- Can be applied to paying BU increment.
- Recent interest in using Coastal Impact Assistance Program funds (Section 384 of Energy Policy Act of 2005) for BU incremental costs.
 - Our position on CIAP for paying increment is that it's a DOI call. Cannot use CIAP as cost sharing match.

SEC. 2037 “REGIONAL SEDIMENT MANAGEMENT”- WRDA 07

- Amends Section 204, WRDA 92 – *HQ developing implementation guidance now; RSM & BU*
- Authorizes development of regional sediment management plans, in cooperation with appropriate Federal, state, regional and local agencies, at Federal expense
 - for sediment obtained through construction, operation, or maintenance of an authorized Federal water resources project.
 - Projects for:
 - ✓ Reduction of storm damages to property
 - ✓ Protection, restoration and creation of aquatic and biologically related habitat including wetlands

SEC. 2037 continued

- Reaffirms Federal Standard
 - Cost share incremental costs above most cost effective disposal consistent with economic, environmental and engineering criteria.
- Cost sharing consistent with Sec. 103 of WRDA 86
 - ✓ Environmental protection and restoration - 65-35
 - ✓ Flood damage reduction – Minimum of 35 % non-Federal & maximum of 50%
 - ✓ Hurricane and storm damage reduction – 65-35
 - ✓ O&M non-Federal

SEC. 2037 continued

- BU project cost limit of \$5M Federal
- Disadvantaged community - 100% Federal cost for aquatic and related habitat BU use project not exceeding \$750,000/project; \$3M annually
- Sec 207 authority unchanged except for cost sharing.
- Sec 145 repealed
 - except for completion of projects being carried out under Sec 145 on the day before the enactment of WRDA 07

SEC. 2037 continued

- Cooperate w/State in preparing State or regional sediment management plan within State boundaries and submit recommendations to Congress for Federal participation in implementation.
- 11 priority areas for regional sediment management projects
- Appropriation authority of \$30M/FY (up from \$15M) including
 - \$5M for regional sediment management plans,
 - \$5M project construction

Integrate BU Opportunities into DMMPs for Federal Projects

- Can integrate multiple nav projects in regional DMMP
 - Corps maintains
 - ~600 Fed coastal and inland harbor channels;
 - ~ 11,000 miles of inland and intra-coastal waterways.
- Planning for the mgmnt of dredged material from these projects is a Federally funded activity from appropriated O&M funds for these Federal projects.
 - Every project or group of projects should have a 20-year plan for DMM.
- “Comprehensive” and “watershed” studies for regions that include navigation projects can also include BU and RSM considerations

Facilitating BU

- Good coordination btwn Planning and O&M; among business line/program managers; partners
 - ID opportunities in advance to help synchronize funding, env compliance rqmnts, etc.
 - Emergency dredging opportunities too
 - Match material w/suitable uses, placement methods/requirements
 - Leverage transportation, mob/demol costs
 - Overcome institutional constraints



BU Examples and other information

Corps & EPA maintain a website w/lots reference material and examples, see:

□ <http://el.erdc.usace.army.mil/dots/budm/>

Beneficial Uses Of Dredged Material - Windows Internet Explorer

http://el.erdc.usace.army.mil/dots/budm/budm.cfm

Beneficial Uses of Dredged Material

- Beneficial Uses**
 - Introduction
 - Decision Process
 - Sediment Types
 - Glossary
 - Links
 - References
 - K-12 Lessons
 - Lead Organizations
 - Authorities
 - Calendars
- Agricultural/Product Uses**
 - Aquaculture
 - Construction Materials
 - Decorative Landscaping
 - Products
 - Topsoil
- Engineered Uses**
 - Beach Nourishment
 - Berm Creation
 - Capping
 - Land Creation
 - Land Improvement
 - Replacement Fill
 - Shore Protection
- Environmental Enhancement**
 - Fish & Wildlife Habitats
 - Fisheries Improvement
 - Wetland Restoration

View by State
Select a State

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Beneficial Uses

Engineered Uses

Environmental Enhancement

Agricultural/Product Uses

Most dredged material can be a valuable resource and should be considered for beneficial uses. The purpose of this site is to demonstrate potential beneficial uses of dredged material by presenting existing case studies as examples. Category descriptions, procedural outlines, and reference resources are also provided.

This site is a collaborative effort between
[U.S. Environmental Protection Agency](#) and [U.S. Army Corps of Engineers](#)

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